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ABSTRACT

The pedagogical studies that are relevant to a theory of teacher leader behavior are surveyed. Numerous investigations of the similarities between leader and teacher behaviors tend to confirm the hypothesis that teaching is a type of leadership. One of the problems of developing a theory of teacher leader behavior is the difficulty of identifying pupil growth or achievement. Research on the university teacher in the classroom, supplemented by some studies of the high school teacher, is considered. Factor analytic studies have consistently revealed two general independent dimensions that account for a wide range of teacher behavior: personal relations with the student and emphasis on the content of the course. These correspond to the dimensions of consideration and structure in leadership studies. Beginning in 1967, there was a specific attempt to find interrelationships between student characteristics and various teacher behaviors and styles. Investigators have also researched various environmental and task factors related to teaching. Suggestions for future research in the field are offered. (SW)

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# IMPROVING THE EFFECTIVENESS OF UNIVERSITY TEACHING: AN APPLICATION OF LEADERSHIP THEORY

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# IMPROVING THE EFFECTIVENESS OF UNIVERSITY TEACHING: AN APPLICATION OF LEADERSHIP THEORY

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ABSTRACT

The research in leadership and teaching effectiveness tend to show remarkable similarities in number and content of the dimensions critical to both fields. A number of authors have investigated the similarities between leader and teacher behaviors, and the results tend to confirm the hypothesis that teaching is a type of leadership. A fruitful direction for improving teaching effectiveness is in the application of leadership theory. This paper will survey the pedagogical studies that are relevant to a theory of teacher leader behavior. Trends in the research will be identified and some suggestions will be offered as to practical and fertile directions for future research in in this field.

## INTRODUCTION

Leadership was originally studied informally by observing the lives of great men or "natural" leaders. Next, leadership was studied by trying to discover and measure certain personality traits or personal qualities of people in leadership positions. This trait approach to the study of leadership was not successful as it revealed few consistent or significant findings.

Most recent studies have focused on trying to determine the major dimensions of leader behavior. Identifying behaviors, as opposed to personality traits, has revealed consistent and significant findings among various researchers. Stogdill [29] presents a comprehensive summary of all the leadership research findings. He identifies the two major leadership dimensions as Consideration and Structure.

While the results of leadership studies have been derived from a broad range of settings, the vast majority have taken place in industrial, military, and small group situations. Only recently has it been postulated that the university classroom could be considered a leadership situation as well.

## TEACHING AS LEADERSHIP

Some investigators contend that leadership style is indentical to what has been traditionally been called teaching style [30] and that teacher behavior is identical to leader behavior [12]. Other investigators see a relationship between the two fields, but offer various qualifications and say that teaching is a leadership situation of a particular kind [8], a special instance of leadership [23], or that teaching effectiveness in the classroom is related to leadership qualities [19]. There have been other researchers who have also investigated teacher behavior as a form of leadership [5] [11] [13] [14] [17].

The model proposed is that teaching involves an interactive process among (at least) the following variables: teacher characteristics, teacher behaviors, student characteristics, student behaviors, the physical and social environment, and the educational task. The framing of classroom dynamics in this context shows an obvious application of the more general leadership variables found in industrial settings. However, the university is not wholly analagous to industrial situations, and there are differences which will be discussed later.

Further clarification is necessary to establish the boundaries and scope of this paper. The educational research reported herein is drawn from settings at

the college level, supplemented by some research at the secondary school level. The university teacher as a leader will be considered in the classroom context. Although university teachers may exhibit leader behavior with their colleagues and in the community at large, these aspects will not be addressed in our discussion.

Effective leadership in the industrial setting is characterized by high group productivity, high member satisfaction, and high group cohesiveness. In a university classroom we could interpret group productivity as the mean of the individual productivity (achievement) of each of the students. Various dimensions of achievement have been used by different educational researchers. The most common dimension is cognitive as measured by a final exam based on a common textbook, although affective and skill dimensions have also been investigated.[1] Productivity can be measured by objective criteria (exam scores) or by subjective criteria such as asking students how much they felt they learned. Objective criteria have the limitation of narrowly defining achievement (performance on cognitive tests) and subjective measures are probably biased with the interaction of student satisfaction.

Measures of satisfaction can be determined from student ratings of courses. A sensitive issue among college teachers is that of popularity. The case of the slack but popular teacher is not unknown. Therefore, there is considerable reluctance among faculty to give serious weight to student satisfaction in evaluating their peers' (or their own) teaching effectiveness.

In Vroom's survey of leadership studies he found no significant correlation between satisfaction and performance [32, pp. 181-187]. This finding suggests a parallel in the investigation of teacher effectiveness, that there

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1 Among them; self-rated personality change, improved adjustment, role flexibility and self-insight, empathy, reasoning ability, creativity, and achievement motivation.

is no simple relationship between student satisfaction and student performance. In fact, one study reports that teacher ratings and student achievement have correlated negatively in very abstract courses [25]. For the above reasons, teaching effectiveness has been usually associated with productivity as opposed to satisfaction.

It is difficult to apply the effective leadership quality of high group cohesiveness. It appears that cohesiveness is a factor in only a very few teaching circumstances. Cohesiveness is crucial in many industrial settings because of the high degree of interdependency among the various members of the work group with respect to goal attainment. This factor is lacking in most classrooms, as goal attainment is typically dependent only on individual effort. Developing group cohesiveness will not be considered a quality of effective teaching in this paper.

Although there have been a number of studies of teacher characteristics as determinants of effective teaching [9] [21], the experience of leadership theory indicates that such an approach would lead to no significant results. Part of the problem has been that personality traits are still poorly conceived and are not measured reliably [1]. Therefore, the literature surveyed here will begin with those studies that focused on teacher behaviors as opposed to traits.

## STUDIES OF TEACHER BEHAVIORS

Factor analytic studies have consistently revealed two general independent dimensions that account for a wide range of teacher behavior [2] [12] [10] [26]. These two dimensions are the personal relations with the student and emphasis on the content of the course. These correspond to the dimensions of

consideration (C) and structure (S) in leadership studies. In fact, the correspondence is nearly one-to-one in a few cases, as some teacher effectiveness studies used an only slightly modified form of standard leadership questionnaires.

The early studies of dimensions of teacher behavior did little more than identify those critical dimensions [2] [12]. In the sixties, research started to hypothesize relationships between consideration (C) and structure (S) and their effects on students' teacher effectiveness ratings and student performance. Investigators found that teacher's C and S behaviors were both related to teacher effectiveness ratings [19] and pupil growth (cognitive) [13].

When teachers filled out leadership questionnaires and leader behavior (both C and S) was judged to be present to a greater than average degree, then the teachers were found to be relatively effective. When leader behavior was present to a less than average degree, then the teachers were found to be relatively ineffective. Students showed a significant relationship between their ratings of effectiveness and their perceptions of their teacher's C and S, and effectiveness was more highly related to C [19].

In another study S was more strongly related to pupil growth than C. Pupil growth was defined as the difference between actual achievement and predicted achievement. It was noted that teachers who rated highly on leadership qualities tended to induce high achievement in their pupils [13].

Those findings were consistent with industrial findings from early leadership studies. It seems that teachers, like supervisors in industry, have to concern themselves with both the feelings of their pupils as well as their level of effort. More recent research (in the last four years) has continued to

substantiate these results [17] [23] [30]. Teachers high on C were rated as superior by their students. Teachers high on S were given zero or negative weight in their ratings. Where C was high, a score of high S did not negatively affect the ratings (the hypothesis is that the structure was seen as supportive and helpful). Where C was rated low, a score of high S was perceived as the most negative of all (the hypothesis is that the structure was seen as threatening and restrictive). Graduate students viewed high S and low C significantly more favorably than freshman or sophmores. It is hypothesized that graduate students have a greater commitment to educational goals and view high S more favorably [17].

Consideration (C) and structure (S) account for the majority of the variance in the teacher effectiveness ratings. Despite research on other dimensions of teacher behavior (e.g. appearance, speaking voice, humor) [23], it seems clear that the dimensions of C and S are the chief factors in determining teaching effectiveness.

Recently, investigators who view teaching as a form of leadership have begun to look at the situational factors in the classroom; namely student characteristics, the environment of the university, and the task factors associated with teaching a particular subject. This parallels the development of the field of leadership in general, where situational theories have developed from theories of leader behaviors. Situational theories have been found to be more reliable, valid, and practical. Changing the task and setting of the group and its leader has led to more success in achieving organizational effectiveness than attempts to change leader behavior [23].

## STUDIES RELATED TO STUDENT CHARACTERISTICS

An important situational factor is the characteristics of the student

(subordinate). There is a significant amount of research relating student characteristics to academic achievement [21], but until recently clear relationships have not been established between student characteristics and effective teaching. The application of leadership theory to teaching style seems to be a useful way with which to view the interaction of these two variables. Before 1965 there was virtually no data to support the position that the teacher's style was of any consequence in the outcome of the teaching-learning process. With respect to cognitive content learning, "the evidence ... conclusively demonstrates that the differences among teaching methods occur only randomly as measured by a final examination" [7, p. 8]. This conclusion was based on the data from over 100 comparative studies of different college teaching methods. The "no difference" results were attributed to the powerful effects of the textbook. Since the student could prepare and study for the exam, the extra study "washes out" the effects of different teaching methods [7].

This widely predominant idea turned out to be at least partially false. Differences among teaching methods did exist, but they were hidden by the averaging effect of aggregating student data. It is the personality variables of the students that can determine whether or not a particular teaching method or style will be effective.

Beginning in 1967 there was a specific attempt to find interrelationships between student characteristics and various teacher behaviors and styles. Although only one of these particular researchers specifically uses leadership terminology [23], others refer to the amount of structure in the classroom, and some refer to behaviors that could be classified as consideration.

Cronbach has classified students according to self-rated anxiety (SRA) in conjunction with rated compulsiveness (RC). Students with high SRA and low RC are referred to as Defensively Motivated (DM), and students with low SRA and high RC are referred to as Constructively Motivated (CM). Although highly structured instruction was associated with better performance results for all groups in the experiment (in contrast with low structure instruction), the structure was by far the most helpful to the DM students. In spite of the problem that structure was not well controlled, this study does offer some insight into the special needs of students with DM characteristics [3].

Stanton's research suggests that "the student likely to do well under a guided reading method, as contrasted with a lecture course, tends to be relatively tense and anxious as compared to his fellow students" [28, p. 496]. This result appears to conflict with the literature showing that anxious students perform better in high S learning environments. Stanton clarifies the apparent contradiction by explaining that his guided readings treatment was a highly structured one which specified objectives and linked the readings to them in detail [28].

Student personality characteristics (achievement need, social need and creativity) were found to influence performance depending upon the instructional method used (conventional lecture, taped lecture, and small group discussion). The student who achieved most in the conventional lecture situation was characterized by moderate achievement and social needs, and low creativity. The student who achieved most under the taped lecture conditions was characterized by low social need, moderate achievement need, and low creativity. A student with high creativity and social need performed best in a small group discussion. High student creativity correlated negatively with achievement under all

teaching methods except small group discussion [6].

When various student demographic variables (sex, age, academic major, year in school) have been investigated in relation to student ratings of teacher performance, there have been widely varied and often contradictory results. A recent review of the literature indicates that positive, negative, and no significant correlations have all been found between these variables and student teacher ratings [24]. Demographic variables do not take into account the dynamics of the student-teacher interaction. Although some norms have been developed, they are not particularly useful in understanding underlying relationships.

Hildebrand [16] investigated the relationships between components of effective teaching and various student characteristics. Of particular relevance to "teacher leader behavior" theory are his findings that students with certain goals (professional training and upward mobility) responded negatively to some consideration behaviors [16]. Presumably, they see consideration as superfluous to their central, cognitive goal.

Components of effective teaching have also been correlated with various student learning styles. Both C and S behaviors can have a positive or negative effect depending upon a student's learning style [24].

An important student characteristic is lack of tolerance for ambiguity (i.e., the authoritarian personality type). This particular variable has been of long standing interest to various leadership researchers. Results of classroom studies bear out the predictions made from the leadership literature on authoritarianism. The most tolerant students rated interpersonal behaviors (C) as more important than structure behaviors (S) [23].

Students' psychological maturity is the independent variable in research investigating the applicability of the Hersey and Blanchard [15] Life Cycle Theory of Leadership to the university classroom. This theory considers the maturity of the group relative to the task it must perform. As the level of maturity of the group increases (or decreases), the style of leadership most appropriate to the group also changes. A recent doctoral dissertation shows limited support for this theory when applied to university teaching [27].

## STUDIES OF ENVIRONMENTAL AND TASK FACTORS

Investigators have researched various environmental and task factors related to teaching. Since the field of leadership was the first to postulate the effect of environmental situational factors, it should come as no surprise that all of these investigators found it appropriate to use leadership models to describe teaching.

In a study of high school students it was found that S exists beyond the teacher's actions within the classroom environment. Students responded to two questionnaires, one asking about S and C in the total classroom and another asking about S and C just with respect to the teacher. Three out of four S items were found to be significantly higher for the classroom than for the teacher. There was no difference between the ratings for the C items [4]. This suggests that some strong influences may exist with respect to S that may not be within the teacher's control.

Other environmental (leader-member relations and position power) and task (task structure) factors in teaching have been investigated using Fiedler's Theory of Leadership Effectiveness. Preliminary research by McNamara [22] did not support the Fiedler model. Fiedler's response was to adjust his model to accommodate this apparently conflicting data. To successfully interpret the results of McNamara, Fiedler incorporated another variable,

organizational complexity, as the most important determinant of situational favorability [10]. It appears methodologically unsound to modify a model by subordinating all of the previous variables to an entirely new variable; yet subsequent research has received partial support for a revised Fiedler model for educational environments [14].

Research in leadership has shown that there exists a relationship between S and the size of the group. Similar research in teaching supports the same results. Class size as an environmental factor has been found to relate to teaching effectiveness most probably with teaching style as an intervening or moderating variable. The rating of teacher behavior on S proved to be a better predictor of overall teacher evaluation in large classes than in small classes. It was shown that C was equally necessary for teacher effectiveness in large classes and in small classes. However, S was more critical than C in large classes and less critical in small classes [23].

## CURRENT TRENDS IN THE RESEARCH

There have been many parallels noted in this paper between the development of general leadership theories and theories of teacher leader behavior (or simply, teacher behavior on C and S dimensions). Early case study approaches in both fields yielded conflicting results. Studies of personality characteristics of leaders and teachers were equally inconclusive.

Investigations of teacher leader behavior have shown a five to fifteen year lag behind the stage of development of general leadership theory and the lag is decreasing. As leadership theory is applied to pedagogy, it seems reasonable to look at the current developments in the leadership field to predict a trend for the course of teacher leadership studies. Conceptualizing the situational variables in teaching appears to be the most promising strategy for improving

research results.

Fiedler's revised model was discussed above. It is questionable whether his model can be successfully applied to an educational environment. However, since the instruments exist and there is already partial support [14], it seems likely that further research will be done along these lines. One prerequisite will be the development of measures for Fiedler's new situational variable, level of organizational complexity.

Level of maturity seems to be a key variable and is especially appropriate to the interaction process between students and teachers. Preliminary results from investigating the Life Cycle theory in the classroom suggest that there exist other contingencies that may require modification of the model. Further research is expected in this area.

A teacher's effectiveness is undoubtably a result of a complex number of variables. These variables can interact to yield further problems of identifying which factors are most relevant to the desired outcomes.

One significant pair of variables is teaching style and learning style. The relationship between these two factors has been investigated at length [18] and further research is expected along these lines. Another pair of variables which may interact to yield effective teaching are student motivation and student ability. General leadership theory is investigating these two variables (for subordinates) to look for relationships to leadership outcomes, and it is expected that teacher leadership theory will also pursue this path in search of useful relationships.

There will be a trend to investigate individual trait-treatment interactions

[3] [28] such as matching dependent students with high S learning environments or matching students with a high social need with instructors who teach via group discussions. This trend is likely to be strong because of the simplicity of the relationships and the methodological ease of handling them, although applying such interactions may not be so easy. As these results are compiled, researchers will postulate and investigate more complex interrelationships. Eventually, a model will be developed which will include a number of the aforementioned variables, and will account for a substantial amount of the variance of teacher evaluations. It has been shown that a student's overall evaluation of teaching is an additive combination of the individual aspects of teacher behavior weighted by the student's estimation of the relative importance of these aspects to good teaching [23].

It is probable that significant gains in teaching effectiveness will come from matching students and the instructional styles with which they learn best. Student variables could be: expectations, learning styles, values, or various personality characteristics. In a large university there could be a program to sort students according to differential aptitudes rather than general aptitudes. This has been the guiding principle in military classification programs, where such a system has had considerable success [3]. A large department would be able to implement this strategy in courses with multiple sections.

Leadership theory has found that "persons who have come to expect strong leadership and are suddenly confronted with the request to share more fully in the decision-making are often upset by this new experience. On the other hand persons who have enjoyed a considerable amount of freedom resent the boss who begins to make all the decisions himself" [31, p. 402-403]. There is

considerable anecdotal evidence to support the same relationships holding true between teachers and students. To date there have been no investigations relating student expectations of teacher leader behavior and teaching effectiveness. It is likely that research will be conducted along these lines.

## SUMMARY

One of the problems of developing a theory of teacher leader behavior is the difficulty of identifying pupil growth or achievement. Students learn both cognitively and affectively. Most of the research has used cognitive measures of pupil learning. Since the effect of extra study may "wash out" the differences in various teaching styles [24], it is hard to identify effectiveness when it is measured by an exam for which a student can prepare. Very little has been done to measure affective student growth. Furthermore, it is in this area where the teacher's behavior and style are likely to have a significant effect.

Some dimensions of effective teaching do not correspond to leadership Consideration and Structure behaviors. Among those investigated have been; the teacher's ability to motivate students [2] [16] [23] [26], teacher's professional involvement [17] [23], punctuality and neatness [2], an analytic/synthetic approach [16], and the area of assignments and evaluation [23].

Similarly, there are aspects of leadership that are unique and are usually not found in teaching. The major ones are the interdependence of subordinates, the factor of group cohesiveness, emergent leadership, and clearly explicit group goals [23].

Despite these differences, there are marked similarities between the fields of teaching and leadership. It is appropriate and fruitful to apply the

most recent developments in the leadership field to teaching, altering various organizational variables rather than trying to get teachers to change their behaviors.

In our attempt to structure the teaching "job" to maximize teaching effectiveness, we should take advantage of a unique situation that exists in large universities, but is seldom found in business organizations: the interchangeability among subordinates (students) and among leaders (teachers). By matching students with teachers we can realize gains in teacher effectiveness and thereby yield higher learning outcomes for students.

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